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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/170,336	10/13/1998	JOHN STUART BEETESON	UK9-98-026	6676

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EXAMINER

NGUYEN, KEVIN M

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/170,336

Applicant(s)

BEETESON ET AL.

Examiner

Kevin M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is made in response to applicant's amendment filed on 12/08/2004. Claims 1-7 and 9-11 are original, claim 8 is amended, and claims 1-11 are currently pending in the application. An action follows below:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Hansen et al (US 5,910,792).

3. As to claim 1, Hansen et al teach the field emission display FED comprising
a cathode means 501 (fig. 5);
row groups 430a, 430b, and 430c (a first plurality of parallel row conductors, fig. 4, col. 4, lines 58-59);
column groups 450a-450d (a second plurality of parallel column conductors, fig. 4, col. 4, line 66);

the operation of the compensating circuit 306 comprises an op-amp 502 which converts the current difference into voltage and sends it to row electrodes 309 via supply voltage signal 412 to make the required correction. At the same time, the voltage

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output from op-amp 502 is sent to op-amp 503 which inverts the polarity of the voltage and sends it to column electrodes 310 via supply voltage signal 418 to make the required correction (col. 6, lines 19-20).

As to claim 2, Hansen et al teaches that an op-amp 502 is a standard op-amp with high gain and low offset (correction, col. 7, lines 4-13). The output of op-amp 502 is connected to sample cathode 509 and to row electrodes 309 (col. 6, lines 49-50). The values of resistors 505-506 can be selected to generate various gain amounts as desired (col. 6, lines 47-48). The output of op-amp 503 is connected to sample gate 511 and to column electrodes 310 (col. 6, lines 50-51).

As to claim 3, Hansen et al teaches RAM 202 and ROM 203 (see fig. 2, col. 3, lines 57-59).

As to claim 4, Hansen et al teaches a faceplate 302 comprising phosphor layers 304 (fig. 3, col. 4, line 9).

As to claim 5, Hansen et al teaches that an op-amp 502 is a standard op-amp with high gain and low offset (correction, col. 7, lines 4-13). The output of op-amp 502 is connected to sample cathode 509 and to row electrodes 309 (col. 6, lines 49-50).

As to claim 6, Hansen et al teaches a difference between the two currents indicating that there are temperature induced effects causing a degradation in the display performance (e.g., brightness), op-amp 502 converts the current difference into voltage and sends it to row electrodes 309 via supply voltage signal 412 to make the required correction (col. 7, lines 4-9).

As to claim 7, Hansen et al teaches a cross sectional view of structure of FED comprising anode 303 is between row groups (430a, 430b, and 430c), column groups (450a-450d) and a faceplate 302 (a screen, fig. 3, col. 4, lines 27-38).

An op-amp 502 is a standard op-amp with high gain and low offset (correction, col. 7, lines 4-13). The output of op-amp 502 is connected to sample cathode 509 and to row electrodes 309. The output of op-amp 503 is connected to sample gate 511 and to column electrodes 310 (col. 6, lines 49-51).

if there is a difference between the two currents indicating there are temperature induced effects causing a degradation in the display performance (e.g., brightness) (col. 7, lines 4-6).

4. As to claim 8 (currently revised), Hansen et al teaches since temperature changes may cause the electrical characteristics of resistor layer 312 to change, compensating circuit 306 is provided to compensate for these changes in accordance to the prevent invention (see fig. 3, col. 4, lines 48-52).

As to claims 9-11, Hansen et al teaches that an op-amp 502 is a standard op-amp with high gain and low offset (correction, col. 7, lines 4-13). The output of op-amp 502 is connected to sample cathode 509 and to row electrodes 309. The output of op-amp 503 is connected to sample gate 511 and to column electrodes 310 (col. 6, lines 49-51). The brightness is increased or decreased by controlling the voltage of the row and column drive lines of the FED screen (the physical location of each said first and said second plurality of parallel conductors, col. 3, lines 1-2).

Response to Arguments

5. Applicant's arguments filed 12/08/2004 have been fully considered but they are not persuasive.

6. In response to applicant's argument, page 7, first paragraph, that claim 1 recites "means for providing cut-off correction information to one of said first or said second plurality of parallel conductors." This argument is not persuasive because Hansen et al expressly teaches, as mentioned earlier (one last line of paragraph 3 above), col. 6, lines 19-20, op-amp 502 is a standard op-amp with high gain and low offset. Examiner clarifies the teaching of Hansen et al's reference as expressly cited before, the op-amp 502 provides the high gain and low offset (cut-off correction information) to row 309 (see fig. 5). Therefore, the teaching of Hansen et al's reference provides and establishes the "substantial evidence" to produce and result the claimed limitation "means for providing cut-off correction information to one of said first or said second plurality of parallel conductors."

7. In response to applicant's argument, page 7, second paragraph, that claim 6-8 recite "provides cut-off and/or gain correction information to either the first conductors or the second conductors to compensate for variations in cut-off and gain which occur during warm up." This argument is not persuasive because Hansen et al expressly teaches, as mentioned earlier (one last line of paragraph 3 above), col. 6, lines 19-20, the op-amp 502 provides the high gain and low offset (cut-off correction information) to row 309 (see fig. 5). Hansen et al further teaches due to applicant amended claim 8, "since temperature changes may cause the electrical characteristics of resistor layer

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312 to change, compensating circuit 306 is provided to compensate for these changes in accordance to the prevent invention" (see fig. 3, col. 4, lines 48-52). Thus, the changes in the temperature corresponds to the warming up as claimed. Therefore, the teaching of Hansen et al's reference provides and establishes the "substantial evidence" to produce and result the claimed limitation "provides cut-off and/or gain correction information to either the first conductors or the second conductors to compensate for variations in cut-off and gain which occur during warm up."

8. In response to applicant's argument, page 7, three last lines through page 8, line 2, that recited "while Hansen applies a constant voltage (i.e., the different signal) to both the row and column conductors, the present invention applies variable correction information to only the row conductors or only the column conductor." In response, Examiner disagrees because Hansen et al teaches, as mentioned earlier, col. 6, lines 19-20, the op-amp 502 provides the high gain and low offset (cut-off correction information) to row 309 (see fig. 5). Thus, the output voltages of the op-amp 502 are changed from the high gain to low offset or from low offset to high gain due to change in temperature, identifying at fig. 3, col. 4, lines 48-52, "since temperature changes may cause the electrical characteristics of resistor layer 312 to change, compensating circuit 306 is provided to compensate for these changes in accordance to the prevent invention."

Hansen et al further teaches, identifying at col. 8, lines 17-29, "the embodiment of FIG. 6 operates as follows, a predetermined current from current source 609 flows through sample resistor 603 to generate a voltage proportional to the resistance of

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resistor 603 and the value of the predetermined current, to the positive input of op-amp 601. This voltage is compared against a reference voltage applied across reference resistor 604. Because of the temperature sensitivity of the sample resistor 603, if there is a difference between the two voltages indicating there are temperature induced effects causing a change in the display performance (e.g., brightness), op-amp 601 amplifies the voltage difference and sends it to column electrodes 310 via supply voltage signal 418 or anode 303 to make the required correction."

Therefore, the teaching of Hansen et al's reference provides and establishes the "substantial evidence" to produce and result the claimed limitation "applies variable correction information to the column conductor."

9. In response to applicant's argument, page 8, lines 1-2, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., only the row conductors or only the column conductors) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

10. In response to applicant's argument, page 8, lines 11-13, that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., dynamically sense temperature and dynamically adjust cut-off and/or gain correction information based on the dynamic sensing) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification,

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limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For these reasons, the rejections based on Hansen et al have been maintained.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Nguyen whose telephone number is 703-305-6209. The examiner can normally be reached on MON-THU from 8:00-6:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick N. Edouard can be reached on 703-308-6725. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the Patent Application Information Retrieval system, see <http://portal.uspto.gov/external/portal/pair>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KMN
February 1st, 2005


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PRIMARY EXAMINER